REMARKS

Claims 9, 13-17 and 20-22 are currently pending in this application This Amendment amends Claims 9 and 13. In view of the foregoing amendments and the following remarks, Applicants respectfully request reconsideration and withdrawal of the rejections and submit that pending Claims 9, 13-17 and 20-22 are in condition for allowance. No new matter has been added.

35 U.S.C. §112 Rejection

The Examiner has rejected Claims 13-17 and 20-22 under 35 U.S.C. § 112, second paragraph, for indefiniteness. Basically, the Examiner asserts that it is unclear if the "cross-linked photodefinable polymer" recited in Claim 13, line 12 is the same photodefinable polymer recited in line 3 of Claim 13 and also in line 4 of Claim 14. In response, the photodefinable polymer recited in Claim 13 has been amended to recite a sacrificial polymer and a photoinitiator. Further, Claim 13 has been amended thus limiting the removing step to only "removing portions of the photodefinable polymer composition to form the three-dimensional structure." Support for the amendment to Claim 13 can be found, for example, in Claim 9 and on page 7, lines 10-12 of the present specification. In view of the above, withdrawal of the rejection and allowance of amended Claim 13 and Claims 14-17 and 20-22, which depend therefrom, either directly or indirectly, are respectfully requested.

35 U.S.C. §102 Rejection

Otani et al.

The Examiner has maintained his rejection of Claim 9 under 35 U.S.C. § 102(b) for anticipation by Japanese Patent No. 2001-226419 to Otani et al. (hereinafter "the Otani patent"). Specifically, the Examiner asserts that such patent teaches (see Abstract) a photocurable resin composition comprising a polyester resin and a photoinitiator. Basically, the Examiner is of the opinion that even though the photoinitiator of the Otani patent increases the thermal resistance of the polymer to make it more stable thermally, the polymer of the Otani patent can still be decomposed; for example, "(there can be other methods than thermal decomposition)." Therefore, the Examiner concludes that the Otani patent teaches a photodefinable polymer including a sacrificial polymer (a decomposable polymer) and a photoinitiator as recited in Claim 9. In response, Claim 9 has been amended to specify that the photodefinable polymer includes a thermally decomposable sacrificial polymer and a

photoinitiator. Support for the amendment to Claim 9 can be found, for example, in Claim 14, page 7, lines 16-19, page 13, lines 26-33 and page 14, lines 12-15 of the present specification. As discussed below in detail, the Otani patent does not disclose such a thermally decomposable sacrificial polymer.

For a rejection under 35 U.S.C. § 102 to be properly made and sustained, the art cited in that rejection must disclose each and every element of the claim(s) called out in the rejection.

MPEP §2131:

> "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

The present invention, as recited in amended Claim 9, is directed to a polymer composition comprising a photodefinable polymer that includes a thermally decomposable sacrificial polymer and a photoinitiator. Such thermally decomposable sacrificial polymer substantially eliminates alterations to the spatial boundaries of the air-region caused by the thermal decomposition of the claimed polymer (page 14, lines 12-15 of the present specification).

The Otani patent is directed to a method for producing a cast and cured product comprising a photocurable resin composition that includes: "(A) 100 pts.wt. unsaturated polyester resin and/or vinyl ester resin, (B) 0-300 pts.wt. filler in a powder shape, and (C) 0.1-10 pts.wt. photopolymerization initiator..." (See Abstract). In Example 2 of the Otani patent, specifically referenced by the Examiner in the previous Office Action, it is stated that: "Moreover, as a result of measuring Tg by the DMA method, prepared with the casting plate by peroxide hardening of the example of a comparison, the numeric value high about 10° C was shown, and it was checked that thermal resistance is also improving." (See the last sentence of paragraph [0045] of page 14 of the translation of the Otani patent). Thus, the Otani patent teaches that adding a photoinitiator lowers the requirements on the curing conditions thereby improving the thermal resistance of the cured resin, thus making it more stable. By purposely increasing the thermal resistance of the photocurable resin composition, the Otani patent not only DOES NOT teach or suggest Applicants' claimed thermally decomposable sacrificial polymer, but also clearly teaches away from such material.

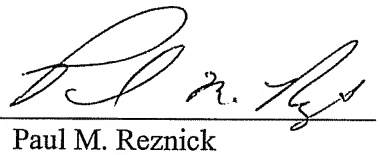
In view of the foregoing, the Otani patent has been shown NOT to disclose, or even suggest amended Claim 9's limitation of a thermally decomposable sacrificial polymer and, therefore, the Otani patent CANNOT anticipate such claim and must be withdrawn. Such action is earnestly sought. Accordingly, Applicants respectfully assert that the Otani patent does NOT meet the requirement stated in MPEP §2131, and thus CANNOT be the basis of a rejection of Claim 9 as amended.

CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that all of the pending claims in the present application are in condition for allowance as currently presented. Accordingly, withdrawal of the pending rejections and an early Notice of Allowance are respectfully requested.

Respectfully submitted,

THE WEBB LAW FIRM

By 

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